

FEATURES

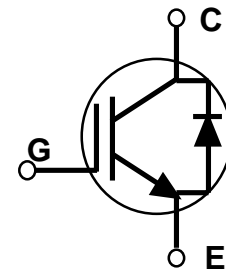
- * High Speed Switching
- * Low Saturation Voltage
: $V_{CE(sat)} = 2.7\text{ V}$ (at $I_C=60\text{A}$)
- * High Input Impedance

TO-264



APPLICATIONS

- * Home Appliance
 - Induction Heater
 - IH JAR
 - Micro Wave Oven



ABSOLUTE MAXIMUM RATINGS

Symbol	Characteristics		Rating	Unit
V_{CES}	Collector-Emitter Voltage		900	V
V_{GE}	Gate - Emitter Voltage		± 25	V
I_C	Continuous Collector Current	$T_C = 25^\circ\text{C}$	60	A
		$T_C = 100^\circ\text{C}$	42	
$I_{CM(1)}$	Pulsed Collector Current		120	A
P_D	Maximum Power Dissipation	$T_C = 25^\circ\text{C}$	200	W
		$T_C = 100^\circ\text{C}$	120	
T_J	Operating Junction Temperature		-55 ~ 150	$^\circ\text{C}$
T_{STG}	Storage Temperature Range			
T_L	Soldering maximum lead temperature (1/8" from case for 10 seconds)		300	$^\circ\text{C}$

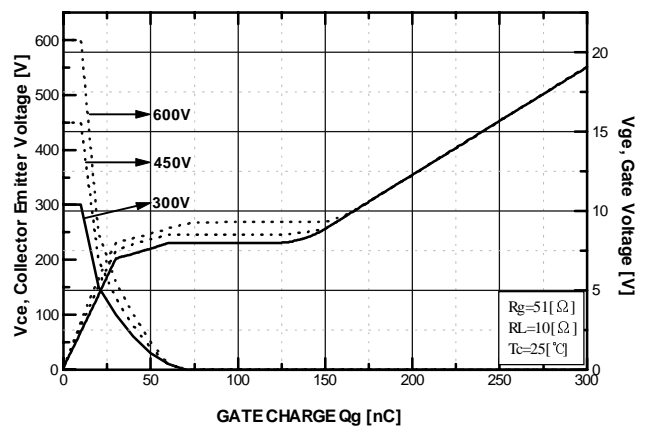
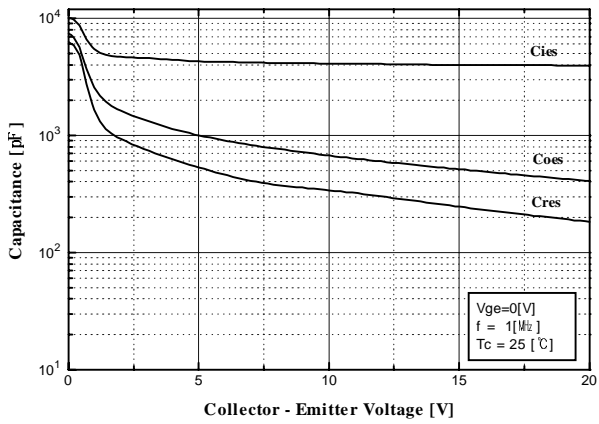
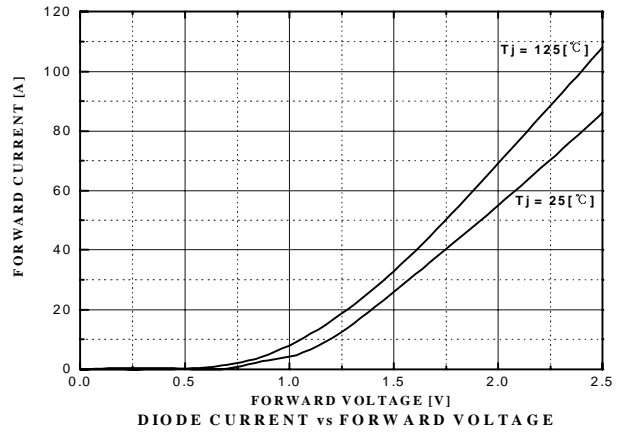
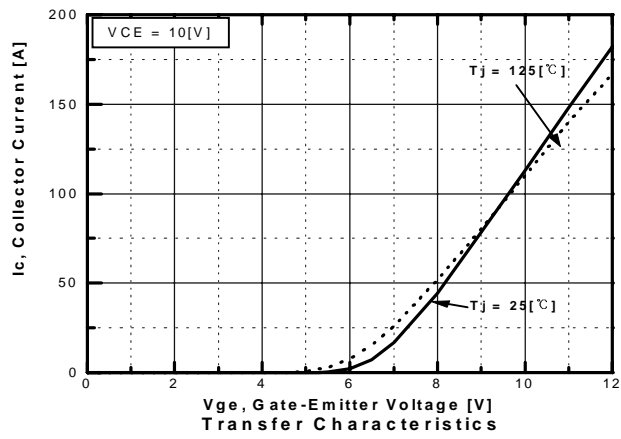
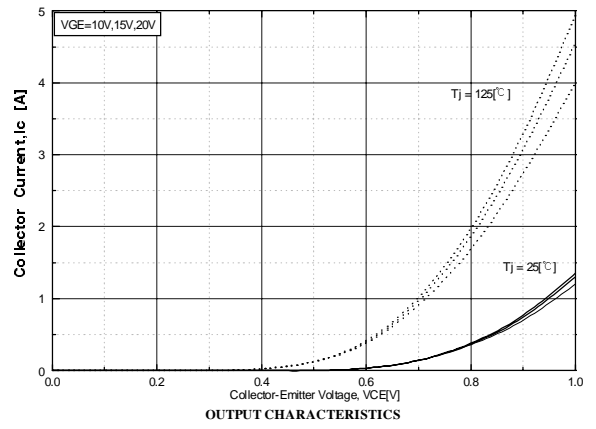
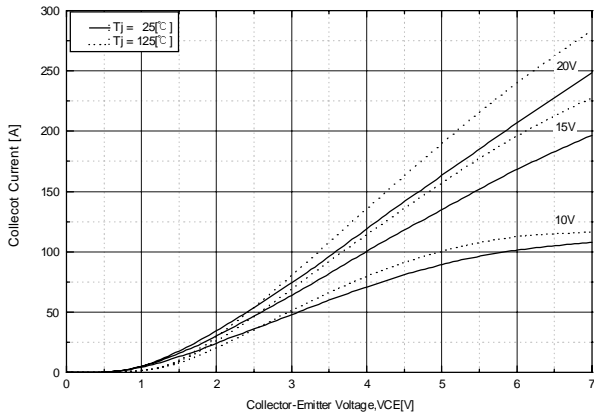
Notes:(1) Repetitive rating : Pulse with limited by max. junction temperature

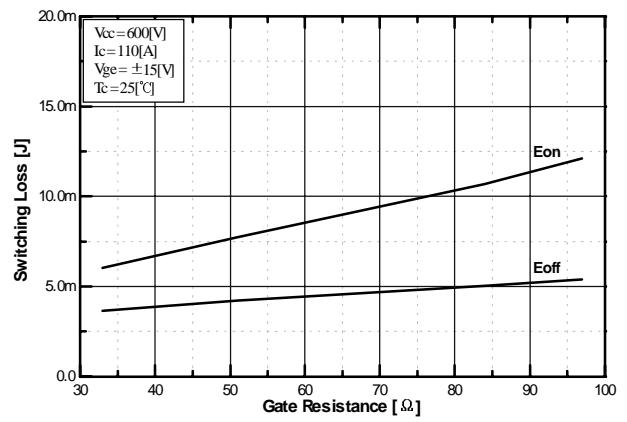
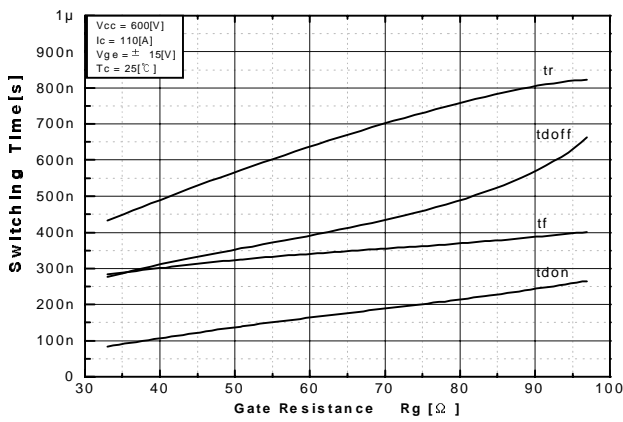
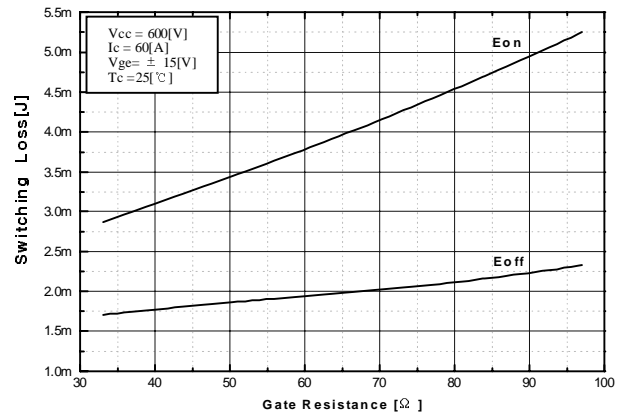
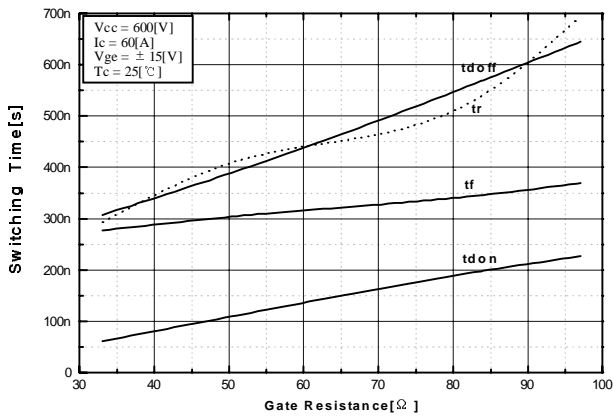
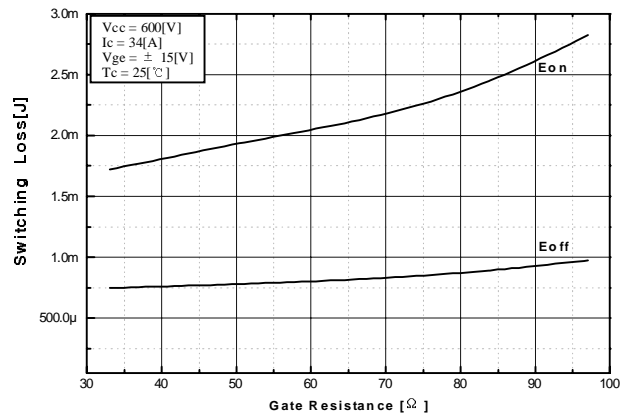
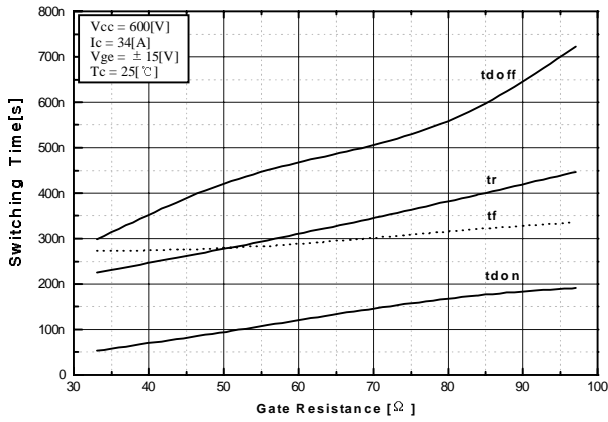
ELECTRICAL CHARACTERISTICS (T_C=25°C)

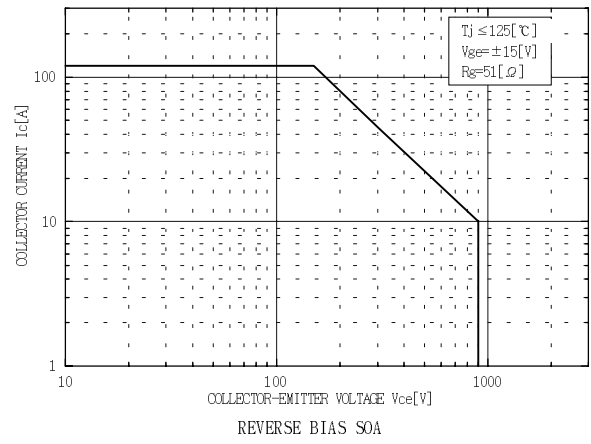
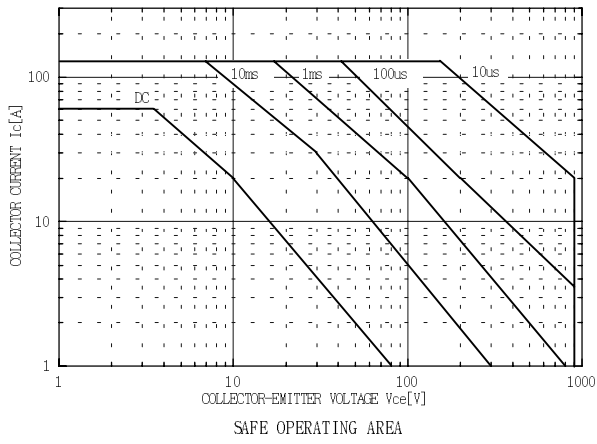
Symbol	Characteristics	Test Conditions	Min	Typ	Max	Units
BV _{CES}	C - E Breakdown Voltage	V _{GE} = 0V , I _C = 1mA	900	-	-	V
V _{GE(th)}	G - E threshold voltage	I _C =60mA , V _{CE} = 10V	4.5	-	7.5	V
I _{CES}	Collector cutoff Current	V _{CE} = V _{CES} , V _{GE} = 0V	-	-	1.0	mA
I _{GES}	G - E leakage Current	V _{GE} = V _{GES} , V _{CE} = 0V	-	-	500	nA
V _{CE(sat)}	Collector to Emitter saturation voltage	V _{GE} = 15V, I _C =60A	-	2.7	3.5	V
Cies	Input capacitance	V _{GE} = 0V , f = 1MHz V _{CE} = 10V	-	4500	-	pF
Coes	Output capacitance		-	800	-	pF
Cres	Reverse transfer capacitance		-	200	-	pF
ton	Turn on time	V _{CC} = 600V , I _C = 60A V _{GE} = 15V R _G = 51Ω Resistive load	-	350	800	ns
tr	Rise time		-	250	600	ns
toff	Turn off time		-	500	1000	ns
tf	Fall time		-	250	400	ns
V _{EC}	Emitter-Collector Voltage	I _E = 15A	-	1.5	2.0	V
trr	Reverse recovery time	I _E = 15A, die/dt = -100A/μs	-	0.7	2.0	μs

THERMAL RESISTANCE

Symbol	Characteristics	Min	Typ	Max	Units
R _{θJC}	Junction-to-Case : IGBT	-	-	0.625	°C/W
R _{θJC}	Junction-to-Case : Diode	-	-	4.0	°C/W







TRADEMARKS

The following are registered and unregistered trademarks Fairchild Semiconductor owns or is authorized to use and is not intended to be an exhaustive list of all such trademarks.

ACEX™
CoolFET™
CROSSVOLT™
E2CMOS™
FACT™
FACT Quiet Series™
FAST®
FASTr™
GTO™
HiSeC™

ISOPLANAR™
MICROWIRE™
POP™
PowerTrench™
QS™
QuietSeries™
SuperSOT™.3
SuperSOT™.6
SuperSOT™.8
TinyLogic™

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF FAIRCHILD SEMICONDUCTOR CORPORATION.

As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, or © whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

LIFE SUPPORT POLICY

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notices in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.